

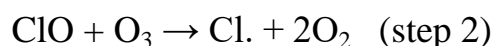
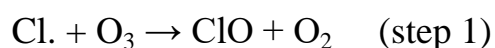
Ozone Depletion and Climate Change

Why are there large quantities of the un-natural (Man Made) CFCs in Antarctica?

In a recent (last August 2016) BBC documentary on the Antarctic weather changes, it has been just mentioned and during the report that there are large quantities of CFCs in Antarctica! Now the question: what are these large quantities of the un-natural (Man Made) CFCs, Ozone layers destructing chemicals doing in Antarctica? And the cause of the start of thinning the ozone layers above Antarctica and the gradual drastic climate changes since early 1970s.

Now this small information about large quantities of CFCs in Antarctica and after 44 years has been revealed and fits with the piece of article which I have read in 1972 stating the following: That in early 1960s some countries have conducted several top secret strategic military experiments on drilling a hole in the ozone layer by using CFCs and the experiments have been taken place in Antarctica. The military objective of these experiments is to make a hole in the stratosphere's ozone layers on a specific area or region on earth to allow the lethal high energy UV/cosmic rays to kill silently the inhabitants of that specified target.

The large quantities of CFCs used in these military experiments have remained and contaminated the Antarctica. CFCs are very stable organic compounds and they do not get easily destroyed and especially at the cold Antarctic conditions. The CFCs reaches the stratosphere which it contains about 90% of ozone, the earth protecting shield. There the CFCs will break down by high energy cosmic and UV radiations to liberate a chlorine atom and this starts to break down the ozone molecules. This chlorine atom will react with ozone to take one oxygen atom from an ozone molecule and liberate a molecule of oxygen and chlorine monoxide. The chlorine monoxide will react with another ozone molecule to form 2 molecules of oxygen and liberate back the chlorine, as the equation below. This single



chlorine atom has ozone destroying cycle and it will keep repeating this reaction and destroying other ozone molecules in thousands . This is resulting in the

thinning of ozone layers and allowing these lethal radiations to enter our planet and gradually causing the climate changes and destructions.

The warming of the Southern Hemisphere during the start of the spring sunrise season (September to November each year) will liberate the CFCs contaminated Antarctic ice to the atmosphere above it. As strong westerly winds (storms) start to circulate around the continent and create an atmospheric container. Within this polar vortex, the freed CFCs and the ones in the ice crystals will be lifted and gradually reach the high-altitude polar stratospheric clouds. Over 50 % of the lower stratospheric ozone is destroyed during the Antarctic spring. This is why the ozone hole (depletion) is mainly concentrated over Antarctica. And it is persisting for a greater part of the year and getting larger every year and much larger than predicted. Therefore as far as these large quantities of CFCs remains in Antarctica, there will be no considerable recovery or healing of the Antarctic ozone.

The discovery of CFCs environmental impact began in 1970 and traces of it found in air everywhere but with much higher concentration in Antarctic's atmosphere. Then scientists have researched and investigated and proven that CFCs are affecting the atmosphere ten miles above Earth's surface and destroy our protective ozone layers. They discovered a gigantic hole in the ozone layer above Antarctica—a region of depleted ozone the size of the United States. Their ozone reading showed a dramatic dip—around 40% and the decline had really started back in early 1970s. Direct measurements made by scientists through the Antarctic ozone hole. Just as predicted, ozone was low where chlorine monoxide was high, strengthening the link between chlorine and ozone depletion.

Since 1970 scientists and researchers were looking for traces of CFCs and other halogenated hydrocarbons in the atmosphere, troposphere and eventually the stratosphere above Antarctica but not in the ice, soil or the water there. This is especially when no data has been published or made public by any researcher on the existence of large quantities of halogenated hydrocarbons in the ice, soil or the water in Antarctica. The scientists have been inspired by a flurry of experiments and atmospheric studies and built atmospheric models. They came up with various hypothesis and proposals on the source of CFCs in air. Their hypothesis, that CFCs are happened to be concentrated in the air above

Antarctica with the ice particles goes into the polar clouds (ice clouds). This is providing a solid surface on which reactions could occur of ozone from CFCs much more efficient and proving the extent of ozone destruction in Antarctica. They have always proposed that CFCs are accumulated in Antarctic's atmosphere carried by storms from around the world. And their source must come from aerosol spray propellants, refrigerants, air conditioning and CFCs used in various industrial applications and made their way to the South Pole. But what about the main source of large quantities of CFCs and other halogenated compounds used in secret experiments in Antarctica and still remains there.

Some of these South Pole stratospheric clouds carrying CFCs could travel the earth and create other ozone holes at different concentrations and affect atmospheric circulation. This is like the existing much smaller ozone holes over Tibet and Arctic-central Siberia and it could affect parts of Scandinavia and Eastern Europe. The summer storm clouds in the United States, and thus may be destroying ozone there as well. The ozone hole has influenced atmospheric circulation all the way to Australia, New Zealand, Chile, South Africa and the tropics. It has increased rainfall at low, subtropical latitudes in the Southern Hemisphere.

The various amounts of these high energy radiations entering the earth atmosphere through the thinning of the ozone layers and the increase of oxygen molecules could have a direct influence over climate change and hence the changing of the period and timing of the 4 seasons. And it effects the growth or the death of plants, microorganisms, animals and human and the balance of the elements in air, water and soil. Also it could affect the temperatures and the levels of water on earth; it could cause draught in some areas and heavy rain falls and floods on other areas on earth. It could cause the melt of ice in some areas and heavy snow falls on other areas. All these could affect human, animal and plants growth, behaviour and health.

The world community has come up with protocols and put a ban and the gradual face out of the use of CFCs and other halogenated hydrocarbons. Then the attention and the campaigns have been shifted and concentrated on the control and the reduction of carbon emissions from the industrial usage of fossil fuels (petroleum and coal). This is to reduce the greenhouse effect and the earth rising temperature. They put a tax on the amount of these emissions and called it Carbon Tax. If the concern comes mainly from the rising of earth

temperatures caused by burning of fossil fuels as widely publicised and presented recently at the Paris and Marrakesh conferences on Climate Change. Then, how can we explain the cooling of many parts of earth? That some areas are getting much cooler than normal and the unusual fall of snow in regions not known to see snow and especially within the past three decades. For example and in the past few years there are heavy snow falls in the Arabian deserts and other parts in the region and the unusual low temperatures, which it was not experienced before.

These high energy radiations penetrating our planet's thinned ozone layers could be directly responsible on the unusual large and repeated forest fires around the globe. The unusual heavy rain and floods have been hitting many parts of the planet. These radiations could also be responsible on the expansion of the African deserts and especially in the north with longer periods of draught. Also the observed gradual changes and destructions of the nature of the coral reefs in Australia. The increased phenomena of El Niño (warm) and La Niña (cold) as complex weather patterns resulting from variations in ocean temperatures in the Equatorial Pacific.

The thinning of earth ozone layers, the penetration of high energy radiations and the increase of oxygen levels caused by the unnatural CFCs could be the main factors influencing the climate changes on earth than the burning of natural fossil fuels.

Recommendations

1- To establish independent scientific teams supervised by independent observers and from different countries to go to Antarctica and measure the quantities of CFCs and other halogenated hydrocarbons in the ice, soil, water and air there, Especially at the areas where there are various well established international research centres.

2- To check if there are any CFCs contaminated animals and their habitats in Antarctica.

3- To come up with well programmed and planed methods and procedures on how to remove safely these unnatural halogenated hydrocarbons from Antarctica's contaminated areas.

4- The countries took part in these secret military experiments, now is the time for them to come up and establish collaboration with these mentioned

independent bodies to locate the areas where their experiments have been taken place. And to reveal the types and the quantities of CFCs and other halogenated hydrocarbons and the periods were used.

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